

## CLAIMS

1. A method for controlling distribution of media contents over a network (1), wherein said contents are distributed by making said contents ( $w_1$ ) available at surrogate servers ( $C_1, \dots, C_n$ ), the method including the steps of:
  - identifying additional contents ( $w_2$ ) eligible for distribution;
  - 10 - defining a set of categories (mf);
  - identifying for each category (mf) at least a reference content (RC/CRC);
    - associating (PM) said additional contents ( $w_2$ ) to said predefined categories (mf) based on semantics affinity with said reference content (RC/CRC), said semantics affinity being calculated (Z) as the distance of each of said additional contents ( $w_2$ ) to said at least a reference content (RC/CRC);
  - 15 - selecting (Z) at least one of said predefined categories (mf); and
    - making (D) at least one of the additional contents ( $w_2$ ) associated to said selected predefined category (mf) available for distribution at said surrogate servers ( $C_1, \dots, C_n$ ).
- 25 2. The method according to claim 1, characterized in that said step of calculating (Z) said semantics affinity as the distance of each of said additional contents ( $w_2$ ) to said at least a reference content (RC/CRC) comprises the step of:
  - involving (Z) the use of data mining/artificial intelligence mechanisms.
- 30 3. The method according to claim 2, characterized in that said mechanisms include at least a mechanism selected among neural networks, fuzzy logic, decision trees.

4. The method according to any of the preceding claims, characterized in that said step of identifying for each category (mf) at least a reference content (RC/CRC) includes the step of using search engines.

5 5. The method according to any of claims 1-3, characterized in that said step of identifying for each category (mf) at least a reference content (RC/CRC) includes the steps of:

10 - identifying a set of reference contents (RC) by using search engines; and

- calculating a central reference content (CRC) of said set of reference contents (RC)..

15 6. The method according to any of the preceding claims characterized in that said step of associating (PM) said additional contents (w<sub>2</sub>) to said predefined categories (mf) based on semantics affinity with said reference content (RC/CRC), comprises the step of:

20 - identifying contents already distributed (w<sub>1</sub>);  
- associating each of said distributed content (w<sub>1</sub>) to said predefined categories (mf) based on semantics affinity with said reference content (RC/CRC), said semantics affinity being calculated as the distance of each of said distributed contents (w<sub>1</sub>) to said at least a reference content (RC/CRC).

25 7. The method according to claim 6, characterized in that it comprises the steps of:

30 - storing (S<sub>1</sub>) the classification of said distributed contents (w<sub>1</sub>) in a first database; and  
- storing (S<sub>2</sub>) the classification of said additional contents (w<sub>2</sub>) in a second database;

8. The method according to claim 7, characterized in that said step of selecting (Z) at least one of said predefined categories (mf) comprises the steps of:

- defining an interest threshold representative at least of a frequency of user requests for a given content; and

5       - extracting from said first database ( $S_1$ ) category information comprising at least one predefined category ( $mf$ ) associated to said given content when said interest threshold is exceeded.

9. The method according to any of claims 7-8, characterized in that said step of making (D) at least 10 one of the additional contents ( $w_2$ ) associated to said selected predefined category ( $mf$ ) available for distribution at said surrogate servers ( $C_1, \dots, C_n$ ) comprises the step of:

- extracting from said second database ( $S_2$ ) 15 contents information related to said at least one additional content ( $w_2$ ).

10. The method according to any of claims 7-9, characterized in that it comprises the steps of:

- identifying additional information comprises at 20 least usage information provided by said surrogate servers ( $C_1, \dots, C_n$ );
- matching said additional information with said category information provided by said first database ( $S_1$ );

25       - generating at least one class template (CL) comprising said matched information;

- adding (I) to said class template (CL) said contents information provided by said second database ( $S_2$ ); and

30       - forwarding said at least one modified class template ( $CL_m$ ) to a distribution system (D).

11. The method according to claim 10, characterized in that said step of adding (I) to said class template (CL) said contents information provided 35 by said second database ( $S_2$ ) comprises the step of:

- accessing a class/policy template repository (E); and
- modifying said class template (CL) according to said content information.

5       12. A system (E) for controlling distribution of media contents over a network, including a set of surrogate servers ( $C_1, \dots, C_n$ ) for distributing said contents, by making said contents ( $w_1$ ) available at said surrogate servers ( $C_1, \dots, C_n$ ), said system (E)

10      including at least:

- a class matcher module (E1) configured for:
  - receiving as input information at least usage information provided by said surrogate servers ( $C_1, \dots, C_n$ ), category information provided by a first database ( $S_1$ ) storing a classification in predefined categories (mf) of said distributed contents ( $w_1$ ), and a predefined interest threshold, said predefined interest threshold being representative at least of a frequency of the request for a given content belonging to a given category;
  - matching with each other said input information so as to generate a class template (CL) comprising said input information, when said predefined interest threshold is exceeded;
- a class/policy template repository (E2) having a first input for receiving said class template (CL) and a second input for adding to said class template (CL) content information provided by a second database ( $S_2$ )

15      storing a classification in said predefined categories (mf) of additional contents ( $w_2$ ), said content information including at least information on an additional content included in said given category; and

20      - a command generator to generate control signals

25      (r') from said modified class template ( $CL_m$ ), said

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control signals ( $r'$ ) being able to control a distribution system (D) in order to make available said at least an additional content ( $w_1$ ) at said surrogate servers ( $C_1, \dots, C_n$ ).

5 13. A system according to claim 12, characterized in that said usage information comprises at least a usage information selected among:

- the share for a content in a given geographic area;

10 - the trend of requests during a given time period;

- data on users requesting a given content;

- statistics concerning those contents most frequently requested;

15 - specific information concerning the most requested content from a given cache server; and

- meta-data for any specific requested contents.

14. A system according to any of claims 12 or 13, characterized in that said control system (E) is associated to a processing system (PM) comprises a semantic extracted module (Z) configured for:

- receiving as inputs:

- said distributed contents ( $w_1$ );

- said additional contents ( $w_2$ );

25 - said predefined categories (mf);

- at least a reference content (RC/CRC) identified for each category(mf);

30 - classifying each distributed content ( $w_1$ ) /additional content ( $w_2$ ) in at least one categories (mf), said classification of each of said distributed contents ( $w_1$ )/additional contents ( $w_2$ ) being based on semantics affinity among said reference content (RC/CRC) and each of said distributed content ( $w_1$ )/additional contents ( $w_2$ ), said semantics affinity being 35 calculated as the distance of each of said distributed

content ( $w_1$ )/additional content ( $w_2$ ) to said at least a reference content (RC/CRC); and

- storing said classification of said distributed contents ( $w_1$ ) in said first database ( $S_1$ ) and said 5 classification of said additional contents ( $w_2$ ) in said second database ( $S_2$ ).

15. A method for controlling distribution of media contents over a network, including a set of surrogate servers ( $C_1, \dots, C_n$ ) for distributing said contents, by 10 making said contents ( $w_1$ ) available at said surrogate servers ( $C_1, \dots, C_n$ ), said method including the steps of:

- receiving input information comprising at least usage information provided by said surrogate servers 15 ( $C_1, \dots, C_n$ ), category information provided by a first database ( $S_1$ ) storing a classification in predefined categories (mf) of said distributed contents ( $w_1$ ), and a predefined interest threshold, said predefined interest threshold being representative at least of a 20 frequency of the request for a given content belonging to a given category;

- matching with each other said input information so as to generate a class template (CL) comprising said input information, when said predefined interest 25 threshold is exceeded,;

- adding to said class template (CL) content information provided by a second database ( $S_2$ ) storing a classification in said predefined categories (mf) of additional contents ( $w_2$ ), said content information 30 including at least information on an additional content included in said given category; and

- generating control signals ( $r'$ ) from said modified class template ( $CL_m$ ), said control signals ( $r'$ ) being able to control a distribution system (D) in

order to make available said at least an additional content ( $w_1$ ) at said surrogate servers ( $C_1, \dots, C_n$ ).

16. A network including a set of surrogate servers ( $C_1, \dots, C_n$ ) for distributing media contents, wherein  
5 said contents are distributed by making these contents available at said surrogate servers ( $C_1, \dots, C_n$ ), characterized in that it includes a control system (E) according to any of claims 12 to 14.

17. A computer program product loadable in the  
10 memory of at least one computer and comprising software code portions for performing the steps of any of claims 1 to 11.

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